REMARKS

Reconsideration of this application is respectfully requested in view of the following remarks.

Claims 1-6 and 8-21 are pending in this application. Claims 1 and 9 are independent.

I. 35 U.S.C. §112 Rejection of Claim 12

The Office Action rejects claim 12 under 35 U.S.C. §112, first paragraph. The Office Action asserts that the compression ratio of less than 3, as recited in claim 12, constitutes new matter. In particular, the Office Action asserts that the specification discloses a compression ratio of only 3 or only 2. The rejection is respectfully traversed.

As discussed during the interview, paragraph [0024] of the specification states that the number of turns of the volute tooth is proportional to the compression ratio of the compressor. Paragraph [0024] discusses a case in which the number of turns of the volute tooth is *two or more*. As the compression ratio and the number of turns of the volute tooth are proportional as described in paragraph [0024], the number of turns of the volute tooth being *two or more* can result in a compression ratio of the compressor of 2 or more. Thus, as discussed during the interview, the recited compression ratio of less than 3 does not constitute new matter. Accordingly, withdrawal of the rejection is respectfully traversed.

II. 35 U.S.C. §112 Rejection of Claims 1-6 and 8-21

The Office Action rejects claims 1-6 and 8-21 under 35 U.S.C. §112, first paragraph. The Office Action asserts that the original disclosure does not disclose seal means being provided "at least partially inside" the groove of the orbiting scroll, as recited in independent claims 1 and 9. The rejection is respectfully traversed.

As discussed during the interview, seal means being provided "at least partially inside" the groove of the orbiting scroll, is shown in at least Figs. 2, 3a, 3b, 4 and 6 of the original disclosure. Further, paragraph [0030] of the specification states that a seal ring 31G provided at the core part of a fixed scroll can be fitted into a seal ring groove 31E of the core part as shown in Fig. 3(a) (see also Fig. 2(a)). Paragraph [0031] of the specification states that the seal ring performs contact sealing by being pressed from a high pressure left side and a lower side as shown by the arrow in Fig. 4. As a result, as shown in Fig. 4, the seal ring protrudes at least partially out of the groove to abut against the upper side of the fixed scroll (see also Fig. 6). Accordingly, as discussed during the interview, an example of the seal means being provided "at least partially inside" the groove of the orbiting scroll is shown in Figs. 4 and 6. Thus, as tentatively agree during the interview, the original disclosure supports the recited feature of seal means being provided "at least partially inside" the groove of the orbiting scroll. Therefore, withdrawal of the rejection is respectfully traversed.

III. 35 U.S.C. §103(a) Rejection of Claims 1-3, 5, 6, 8-12, 14-18, 20 and 21

The Office Action rejects claims 1-3, 5, 6, 8-12, 14-18, 20 and 21 under 35 U.S.C. §103(a) over Takao et al. ("Takao"), JP-A-08-326671, in view of Suefuji et al. ("Suefuji"), JP-A-08-170592. The rejection is respectfully traversed.

Independent claim 1 is directed to a scroll compressor comprising, *inter alia*, an orbiting scroll having a groove on both surfaces of an orbiting base plate, seal means provided at least partially inside the groove of the orbiting scroll, and a pair of fixed scrolls opposed to both surfaces of said orbiting base plate. The seal means is provided for sealing the compression chambers formed between the orbiting scroll and the fixed scrolls from an orbiting bearing provided at a main shaft side of the

orbiting scroll and from main shaft bearings provided between the fixed scrolls and the main shaft. Independent claim 9 recites similar features.

Takao discloses a compressor having a clamp shaft 8, and a turning scroll 6 provided between fixed scrolls 4 and 5 forming compression chambers 16, 17 (see Fig. 8). Seal elements 43, 44 are respectively provided on upper and lower surfaces of the turning scroll 6 as shown in Fig. 8 (see also paragraph [0030] of the computer generated translation). Takao's scroll is a "floating scroll" due to the interaction of the operating chamber 19 and communication hole 5g shown, for example, in Fig. 8 of Takao. In addition, fixed bearings 2a and 3a are respectively provided between the shaft 8c and first and second support frames 2 and 3 rather than between the shaft and fixed scrolls 4 and 5.

The Office Action acknowledges that Takao fails to disclose main shaft bearings provided between the fixed scrolls 4 and 5 and the main shaft 8, as recited in independent claims 1 and 9. However, the Office Action asserts that Suefuji discloses these features. Suefuji discloses a first fixed bearing 212 in conjunction with a lower scroll and a second fixed bearing 222 in conjunction with an upper scroll (see Fig. 8 of Suefuji). The Office Action takes the position that it would have been obvious to one skilled in the art to modify Takao's compressor to include Suefuji's fixed bearings 212 and 222 between Takao's fixed scrolls 4 and 5 and the clamp shaft 8.

However, as agreed during the interview, modifying Takao's compressor to include Suefuji's fixed bearings 212 and 222 between Takao's fixed scrolls 4 and 5 and the clamp shaft 8 would destroy the communication between the operating chamber 19 and communication hole 5g, and hence destroy the floating scroll

mechanism of Takao. That its, the stated modification would render Takao's floating scroll unsatisfactory for its intended purpose (MPEP §2143.01(V)) and change the principle of operation of the floating scroll (MPEP §2143.01(VI)). Thus, as agreed during the interview, it would not have been obvious to one skilled in the art to modify Takao's compressor to include Suefuji's fixed bearings 212 and 222 between Takao's fixed scrolls 4 and 5 and the clamp shaft 8.

In addition, Takao's fixed scrolls 4 and 5 are connected to first and second support frames 2 and 3, respectively, which already have the fixed bearings 2a and 3a (see Fig. 8 and paragraphs [0014] and [0015]). Thus, modifying Takao's compressor to include Suefuji's fixed bearings would have been superfluous.

Therefore, the combination of Takao and Suefuji fails to disclose, and would not have rendered obvious, the combination of features recited in independent claims 1 and 9, including seal means provided for sealing compression chambers from an orbiting bearing provided at a main shaft side of the orbiting scroll and from main shaft bearings provided between the fixed scrolls and the main shaft, as recited in independent claims 1 and 9. Thus, in independent claims 1 and 9 are patentable over Takao and Suefuji for at least these reasons.

Claims 2, 3, 5, 6, 8, 10-12, 14-18, 20 and 21 are patentable over Takao and Suefuji at least by virtue of their dependence from patentable independent claims 1 and 9, respectively. Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully traversed.

IV. 35 U.S.C. §103(a) Rejections of Claims 4, 13 and 19

The Office Action rejects claim 4 under 35 U.S.C. §103(a) over Takao in view of Suefuji, and further in view of Suzuki et al., JP-A-61-268880 or Hara et al., JP-A-

05-180181; and rejects claims 13 and 19 under 35 U.S.C. §103(a) over Takao in view of Suefuji, and further in view of Uchida et al., U.S. Patent Application Publication No. 2003/0000238 A1 or Inagaki et al., JP-A-2003-21084. The rejections are respectfully traversed.

Suzuki, Hara and Uchida fail to cure the deficiencies of the combination of Takao and Suefuji. Accordingly, Claims 4, 13 and 19 are patentable over the applied references at least by virtue of their dependence from patentable independent claims 1 and 9, respectively. Thus, a detailed discussion of the additional distinguishing features recited in these dependent claims is not set forth at this time. Withdrawal of the rejection is respectfully traversed.

VI. Conclusion

In view of the above remarks, reconsideration of this application and withdrawal of the rejections are respectfully.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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Date: July 22, 2009

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